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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,076	03/22/2004	Thang Q. Dang	911-5.10-2	1378

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EXAMINER

GILLAN, RYAN P

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SP

Office Action Summary	Application No. 10/806,076	Applicant(s) DANG, THANG Q.	
	Examiner Ryan P. Gillan	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Von Der Heyde et al. (5,533,886). Von Der Heyde et al. teach a diaphragm pump, having a diaphragm coupled to a wobble plate, the diaphragm and the wobble plate each having a front surface disposed so as to face the other, the diaphragm pump characterized in that the coupling comprises (clearly seen in figure 1): a post (4) protruding from the front surface of the wobble plate and at least at least partially surrounded by a collar (unnumbered, but clearly seen in figure 1); and a pin protruding from the front surface of the diaphragm the pin having a recess (28) for mating with the post, and having an outer portion surrounding the recess and able to resiliently deform so as to squeeze through the collar when the pin is pushed onto the post; wherein the outer portion of the pin includes a locking feature (clearly seen in figure 8) for holding the pin on the post when the pin is pushed onto the post. The pin formed so as to have one or more ring features (4a) along a bonding area between the pin and the diaphragm.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 3746

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3, 4, and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Von Der Heyde et al. in view of Yamada (5,743,169). Von Der Heyde et al teach all of the claim limitations as cited above, but fail to teach the pin and the diaphragm made from respective different thermoplastic materials, and the pin is made from a harder material than the diaphragm; wherein the respective different thermoplastic materials are from the same family of thermoplastic materials. Yamada teaches the pin and the diaphragm made from respective different thermoplastic materials, and the pin is made from a harder material than the diaphragm (col. 7 lines 29-52); wherein the respective different thermoplastic materials are from the same family of thermoplastic materials. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Von Der Heyde et al. to incorporate the use of said thermoplastic materials, as taught by Yamada, as a means of reducing the cost of manufacture as well as reduce the weight of the diaphragm assembly (col.10 lines 57-62).

With respect to the method of claims 6-10, said method would have been obvious to one having ordinary skill in the art at the time of the invention, because the only method provides the apparatus as cited above.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Art Unit: 3746

- Fukami (6,264,438) teaches a diaphragm and a wobble plate with a connecting member between the two.
- Meyer (6,655,257) teaches a diaphragm pump with a diaphragm with a receiving portion and a connecting rod.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan P. Gillan whose telephone number is 571-272-8381. The examiner can normally be reached on 8:00 am - 4:30 pm; Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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CHARLES G. FREAY
PRIMARY EXAMINER